### IN THE SPECIFICATION:

On page 15 of the English language translation of the specification, please amend the first heading of the specification to appear as follows:

### **Description** Technical Field

On page 16 of the English language translation of the specification, please add a heading before the first full paragraph of the specification to appear as follows:

## **Background**

On page 16 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

In principle, counter track joints of the above-mentioned type are known from DE 102-20 711-A1 U.S. Patent No. 6,848,999 showing joints with 6 balls and with 8 balls. The type of ball tracks described here corresponds to the type known in itself from Rzeppa joints (RF joints) and undercut-free joints (UF joints). This means that the centre center lines of the ball tracks consist of uniform radii (RF joints) and, respectively, are composed of radii and adjoining axis-parallel straight lines (UF joints). In the counter track joints described, the axial opening direction of the pairs of tracks alternates around the circumference, which leads to the type of counter track joint. Counter track joints of this type are disadvantageous in that the angle of articulation is limited to approximately 45 degrees because when this angle of articulation is exceeded, the first ball in the joint articulation plane leaves the first pairs of track.

On page 16 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

From DE 103 37 612 A1 there are known counter track joints wherein the track centre center lines of the first pairs of tracks whose opening angle – when the joint is in the aligned condition – points towards the joint base, are designed in such a way that, when the joint is articulated, the opening angle, from a certain angle of articulation onwards, experiences a reversal of its direction of opening. More particularly, this is achieved in that the centre center lines of the ball tracks of the first pairs of tracks are S-shaped and thus each comprise a turning point.

On page 16 and continuing on page 17 of the English Language translation of the specification, please amend the third full paragraph of the specification to appear as follows:

DE 100-60-220 A1 U.S. Publication No. 2004/116192, inter alia, describes counter track joints wherein the centre center lines of the first outer ball tracks comprise a turning point near the joint aperture, so that the centre center lines of the first outer ball tracks are S-shaped. Because of the requirement of symmetry, the same applies to the centre center lines of the first inner ball tracks of the inner joint part. The angle of articulation of said counter track joints can be increased in this way.

On page 17 of the English language translation of the specification, please add a heading between the first and second full paragraphs of the specification to appear as follows:

# **Summary Of The Invention**

On page 17 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

Based on this, it is the <u>an</u> object of the present invention, starting from the state of the art mentioned initially, to develop a fixed joint et <u>of</u> the counter track type, which can achieve increased angles of articulation and features an increased service life.

On page 18 and continuing on page 19 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

The One solution consists in providing provides a joint with the following characteristics: an outer joint part which comprises a first longitudinal axis and an attaching end and an aperture end which are axially opposed relative to one another, and which outer joint part further comprises first outer ball tracks and second outer ball tracks; an inner joint part which comprises a second longitudinal axis and an attaching means mechanism for a shaft pointing to the aperture end of the outer joint part, and which inner joint part further comprises first inner ball tracks and second inner ball tracks; the first outer ball

tracks and the first inner ball tracks form first pairs of tracks with one another; the second outer ball tracks and the second inner ball tracks form second pairs of tracks with one another; the pairs of tracks each accommodate a torque transmitting ball; a ball cage is positioned between the outer joint part and the inner joint part and comprises circumferentially distributed cage windows which each accommodate at least one of the balls; when the joint is in the aligned condition, the aperture angle of the first pairs of tracks opens in the central joint plane from the aperture end to the attaching end of the outer joint part; when the joint is in the aligned condition, the aperture angle of the second pairs of tracks opens in the central joint plane from the attaching end to the aperture end of the outer joint part, characterised in that wherein the central track lines of the first pairs of tracks each have a turning point T<sub>1-2</sub> and that the centre center angle β from the joint center M to at the turning point, with reference to the central joint plane, is greater than 4°. In this way it is ensured that, within the service life range of operation, the joint operates according to the principle of as a counter track joint. The service life range of operation refers to joint operation within the service life angle at which the design service life of the joint is reached under changing load conditions without the joint suffering any damage.

On page 19 and continuing on page 20 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

According to a first preferred embodiment, it is proposed that that the centre center angle  $\beta$  from the joint center M to at the turning point P<sub>1-2</sub>, with reference to the central joint plane E, is greater than 5°. According to a further embodiment, it is proposed that the centre center angle  $\beta$  from the joint center M to at the turning point P<sub>1-2</sub>, with reference to the central joint plane E, is smaller than 12°.

On page 20 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

Furthermore, it is proposed that a tangent  $T_{1-2}$  at the central track line of the first pairs of tracks in the turning point  $P_{1-2}$  forms a turning point angle  $\alpha$ , with the respective longitudinal axis and, respectively, that a perpendicular line on said tangent  $T_{1-2}$  forms a turning point angle  $\alpha$  with the central joint plane (E), which turning point angle is defined by:

$$\alpha \ge \beta + \arcsin \left[ \frac{O_2}{R_2} - \sin (\beta + 90^\circ) \right]$$

wherein  $O_2$  is the axial distance between the point of intersection of a perpendicular line on the tangent  $\mp_{4-2}$  and the respective longitudinal axis A <u>from the central joint plane E</u> and wherein R2 is the distance between said point of intersection and the turning point  $P_{1-2}$ .

On page 20 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

According to a further first special embodiment it is proposed that the turning point angle α is defined by:

$$\alpha \ge \beta + \arcsin \left[ \frac{O_2 + a \cdot \tan(\beta)}{R_2} - \sin(\beta + 90^\circ) \right]$$

if the respective track centre center lines in the central joint plane E and up to the turning point  $P_{4-2}$   $\underline{T_{1-2}}$  comprise a radius  $R_2$  whose centre center  $M_2$  comprises an axial distance  $O_2$  from the central joint plane E and a radial distance a from the respective longitudinal axis in the direction towards the turning point  $P_{4-2}$   $\underline{T_{1-2}}$ .

On page 20 and continuing on page 21 of the English Language translation of the specification, please amend the third full paragraph of the specification to appear as follows:

An alternative special embodiment consists in provides that the turning point angle  $\alpha$  is defined by:

$$\alpha \ge \beta + \arcsin \left[ \frac{O_2 - b \cdot \tan(\beta)}{R_2} - \sin(\beta + 90^\circ) \right]$$

if the respective track centre center line in the central joint plane E and up to the turning point  $P_{1-2}$   $T_{1-2}$  comprise a radius  $R_2$  whose centre center  $M_2$  comprises an axial distance

 $O_2$  from the central joint plane E and a radial distance b from the respective longitudinal axis A in the direction away from the turning point  $P_{1-2} \underline{T}_{1-2}$ .

On page 21 and continuing on page 22 of the English Language translation of the specification, please amend the second full paragraph of the specification as follows:

In said relationships, the parameters used have the following meaning:

PCDB: pitch circle diameter of balls

R1: outer part ball track radius 1 (first ball tracks)
R2: outer part ball track radius 2 (first ball tracks)

R3: outer part ball track radius 3 (first ball tracks)

R4: outer part ball track radius 4 (second ball tracks) R5: outer part ball track radius 5 (second ball tracks)

O2: outer part ball track offset for track with opening angle towards attaching end

O5: outer part ball track offset for track with opening angle towards aperture end

OD: outer diameter outer part

L : length inner part DB : ball diameter

PCDS: pitch circle diameter of splines

DCA: cage outer diameter DCI: cage inner diameter W: cage web width

L1 : cage window length 1 (first cage windows)L2 : cage window length 2 (second cage windows).

On page 22 of the English language translation of the specification, please add a heading before the first full paragraph to appear as follows:

**Brief Description Of The Drawings** 

On page 22 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

Preferred Several embodiments of the invention are illustrated in the drawings and will be described below:

On page 22 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

Figure 1 shows an inventive counter track joint with 6 balls in a first embodiment:

- a) A) in a complete view in a longitudinal section; and
- b) B) with its outer joint part in the form of a detail in a longitudinal section.

On page 22 of the English Language translation of the specification, please amend the third full paragraph of the specification to appear as follows:

Figure 2 shows a counter track joint with 6 balls according to Figure 1:

- a) A) in a longitudinal section with dimensional specifications:
- b) B) in a longitudinal section with further dimensional specifications; and
- e) C) the ball cage as a detail in a developed view.

On page 23 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

Figure 3 shows a counter track joint with 8 balls similar to that shown in Figures 1 and 2:

- a) A) with dimensions in a longitudinal section:
- b) B) in an angled position with further dimensional specifications; and
- e) C) the ball cage as a detail in a developed view.

On page 23 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

Figure 4 shows an inventive joint with 6 balls in a second embodiment:

- a) A) in a complete view in a longitudinal section:
- b) B) the outer joint part as a detail in a longitudinal section; and
- e) C) the inner joint part as a detail in a longitudinal section.

On page 23 of the English Language translation of the specification, please amend the fourth full paragraph of the specification to appear as follows:

Figure 6 shows the inventive joint according to Figures 4 and 5 with further dimensional specifications:

- a) A) in a longitudinal section through the outer joint part;
- b) B) in a cross-section through the ball tracks; and
- e) C) an evaluation table.

On page 24 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

Figure 9 shows an inventive 6-ball counter track joint with a definition dimensional specifications of the counter tracks:

- a) A) in an axial view; and
- b) B) in a longitudinal section.

On page 24 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

Figure 10 shows an inventive 6-ball counter track joint with a definition dimensional specifications of the counter tracks:

- a) A) in an axial view; and
- b) B) in a longitudinal section.

On page 24 of the English Language translation of the specification, please amend the third full paragraph of the specification to appear as follows:

Figure 11 shows an inventive 6-ball counter track joint with a definition dimensional specifications of the counter tracks:

- a) A) in an axial view; and
- b) B) in a longitudinal section.

On page 24 of the English Language translation of the specification, please amend the fourth full paragraph of the specification to appear as follows:

Figure 12 shows an inventive 6-ball counter track joint with a definition dimensional specifications of the tracks:

- a) A) in an axial view; and
- b) B) in a longitudinal section through the joint (RF track).

On page 24 of the English Language translation of the specification, please amend the fifth full paragraph of the specification to appear as follows:

Figure 13 shows an inventive 8-ball counter track joint with a definition dimensional specifications of the counter tracks:

- a) A) in an axial view;
- b) B) in a first longitudinal section; and
- e) <u>C)</u> in a second longitudinal section.

On page 24 of the English Language translation of the specification, please amend the sixth full paragraph of the specification to appear as follows:

Figure 14 shows an inventive 8-ball counter track joint:

- a) A) in an axial view;
- b) B) in a first longitudinal section; and
- e) <u>C)</u> in a second longitudinal section.

On page 25 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

Figure 15 shows an inventive 8-ball counter track joint:

- a) A) in an axial view;
- b) B) in a first longitudinal section; and
- e) <u>C)</u> in a second longitudinal section.

On page 25 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

Figure 16 shows an inventive 8-ball counter track joint:

- a) A) in an axial view;
- b) B) in a first longitudinal section; and
- e) C) in a second longitudinal section.

On page 25 of the English Language translation of the specification, please amend the third full paragraph of the specification to appear as follows:

Figure 17 shows an inventive 6-ball counter track joint with a definition of the tracks and with further details:

- a) A) the outer joint part in a longitudinal section;
- b) B) an outer track in a longitudinal section;
- e) C) the inner joint part in a longitudinal section;
- d) D) an inner track in a longitudinal section; and
- e) E) an evaluation table.

On page 25 of the English Language translation of the specification, please amend the fourth full paragraph of the specification to appear as follows:

Figure 18 shows an inventive 8-ball counter track joint similar to that shown in Figure 13, with a definition specification of individual parameters:

- a) A) in an axial view;
- b) B) in a first longitudinal section;
- e) C) in a second longitudinal section; and
- d) D) in a cross-section through the ball cage.

On page 25 of the English Language translation of the specification, please amend the fifth full paragraph of the specification to appear as follows:

Figure 19 shows an inventive 8-ball counter track joint similar to that shown in Figure 13 with a definition specification of the tracks:

- a) A) in an axial view;
- b) B) in a longitudinal section through the outer joint part; and
- e) C) in a longitudinal section through the ball cage.

On page 26 of the English language translation of the specification, please add a heading before the first full paragraph to appear as follows:

#### **Detailed Description**

On page 26 and continuing on page 27 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

The two illustrations of Figure 1 will be described jointly below. An inventive constant velocity joint 11 comprises an outer joint part 12 with an aperture 25 with a closed base 13 and an integrally attached journal 14. Furthermore, the joint comprises an inner joint part 15, a ball cage 16 as well as torque transmitting balls 17. First outer ball tracks 18 and first inner ball tracks 19 accommodate balls 171 and form first pairs of tracks with one another. Second outer ball tracks 20 and second inner ball tracks 21 form second pairs of tracks which receive second balls 172. The two types of pairs of tracks are alternately arranged around the circumference. Tangents at the balls in the points of contact with the first pairs of tracks which are shown in the drawing, together, form an opening angle  $\delta_1$  which opens in the direction towards the base 13. Tangents at the second balls 172 in the points of contact with the second pairs of tracks, together, from an opening angle  $\delta_2$  which opens towards the aperture 21 of the outer joint part. When the joint is in the aligned condition and subjected to torque, said opening angles generate axial forces referred to as F<sub>1</sub> and F<sub>2</sub> and apply those to the balls and thus to the ball cage 16. A central joint plane E which receives the centres centers of the balls intersects the longitudinal axis of the joint in a joint centre center M, which longitudinal axis of the joint is defined by the longitudinal axis A<sub>12</sub> of the outer joint part and by the

longitudinal axis  $A_{22}$  of the inner joint part. With reference to the <u>centre center</u> lines  $L_{18}$  of the ball tracks 18 in the outer joint part 12, the tracks 18 in the central plane comprise a radius  $R_2$  whose <u>centre center</u> is offset by an axial offset  $O_2$  on the axis A relative to the joint <u>centre center</u> M, whereas the tracks 20 comprise an identically sized radius  $R_5$  whose <u>centre center</u> is offset by an offset  $O_5$  in the opposite direction relative to the joint <u>centre center</u> M.

On page 27 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

In Figure 2, any details identical to those shown in Figure 1 have been given the same reference numbers. In illustration a) Figure 2A, a shaft 22 is inserted into the inner joint part 15. In addition to the longitudinal axis A<sub>12</sub> of the outer joint part, there is shown the longitudinal axis A<sub>22</sub> of the inner joint part which, in the same way, corresponds to the longitudinal axis of the inner joint part 15. With reference to the longitudinal axis A<sub>22</sub>, service life angles 2B are given on both sides; they indicate the maximum angle of articulation at which the joint can be operated without suffering any damage in the service life test. The service life test is meant to refer to a load spectrum which corresponds to the practical use of a joint in the course of the design service life. When the shaft 22 is articulated relative to the outer joint part 12 at the articulation angle 2ß on both sides each, the balls 17<sub>1</sub> in the inventive ball tracks 18, 19 carry out movements along the track centre center line, which movements are defined by the life angle \( \beta \) on both sides each from the central joint plane E, wherein the legs of the angle are formed by the central joint plane E and by rays through the ball centre center. Illustration c) Figure 2C shows the ball cage 16 in a developed view with three circumferentially distributed cage windows 23, 24. Balls 17<sub>1</sub> held in first pairs of tracks apply an axial force F<sub>1</sub> to the ball cage and balls 17<sub>2</sub> held in second pairs of tracks apply an axial force F<sub>2</sub> to the ball cage. Because of the alternating arrangement of first and second pairs of tracks, even when transmitting torque across via the joint, is axially balanced.

On page 27 and continuing on page 28 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

In Figure 3, the same features have been given the same reference numerals, and modified features have been indexed by 100. In illustration—a)—of Figure 3  $\underline{3A}$ , with reference to the longitudinal  $A_{22}$  of the shaft 22, there is shown on both sides each — in addition to the service life <u>articulation</u> angle  $2\beta$  — the maximum articulation angle  $\beta_{\text{max}}$   $\underline{2\beta}_{\text{max}}$ . Accordingly, with reference to the position of the ball centre center relative to the

outer joint part, there are again shown half the service life angles  $\beta$  as well half the maximum articulation angles  $\beta_{max/2}$  on both sides, starting from the central plane E. The ball positions in the outer joint part at the maximum joint articulation angle  $\beta_{max}$  are shown in dashed lines.

On page 28 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

Illustration b) Figure 3B shows the maximum articulation angle at the joint 111 in a direction in which the balls 17<sub>1</sub> move in the inventive pairs of tracks <del>18, 19</del> <u>118, 119</u> towards the aperture 21 of the outer joint part 42 112. Because of the S-shaped course followed by the inventive ball tracks  $\frac{18}{19}$  118, 119, the opening angle  $\delta_1$  between the tangents at the balls 171 in the first pairs of tracks has reversed its direction and also opens towards the aperture end 21 of the outer joint part 12 112, whereas the second pairs of tracks with tracks 20, 21 120, 121 of the Rzeppa joint type form an opening angle  $\delta_2$  whose size, admittedly, changes, but which, as in the aligned joint position according to Figure 2, continues to open towards the aperture end 21 of the outer joint part 42 112. The directions of the forces F<sub>1</sub>, F<sub>2</sub> acting on the balls in the sectional plane correspond to the opening angles  $\delta_1$ ,  $\delta_2$ . As can be seen in illustration d) Figure 3C, all the ball forces, in respect of their effect, correspond to one another as regards their direction, even if not in respect of size, so that a counter force FG for against the sum of the ball forces acting on the cage has to be applied by the outer joint part to the cage. In accordance with the invention, such a counter force F<sub>G</sub> occurs only if the service life angle 2\beta is exceeded, while inside the service life angle 2\beta the cage remains axially balanced.

On page 29 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

In Figure 4, similar features have been given the same reference numerals, and modified features have been further indexed by 100. Figure 4, in greater detail, shows a possible course which can be taken by the track eentre center lines  $L_{18}$ ,  $L_{19}$  of the outer joint part 212 and of the inner joint part 215 for the inventive ball tracks  $\frac{18}{19}$ ,  $\frac{19}{218}$ ,  $\frac{219}{219}$  according to a first embodiment. The inventive ball tracks whose course is represented by track eentre center lines  $L_{18}$ ,  $L_{19}$  are S-shaped, and the figure also shows the position of the turning point  $T_{1-2}$  which, starting from a radius  $R_2$  (outer joint part) and, respectively,  $R_2$  (inner joint part) is laid around an offset point  $O_2$  and  $O_2$  respectively, is positioned at an angle  $\alpha$  relative to a radial plane, i.e. a plane extending

parallel to the central joint plane E. Beyond the turning point  $T_{1\text{-}2}$ , the track centre center line continues in a radius  $R_1$  (outer joint part), and respectively,  $R_{1'}$  itself. In accordance with the invention, the turning point  $T_{1\text{-}2}$  as well as the turning point  $T_{1\text{-}2'}$  are positioned outside the angle sector of the angle  $\beta_{\text{L}\!/2}$   $\beta$  as viewed on each side of the central joint plane E. As the reversal of the direction of the angle  $\delta_1$ , upon the turning point  $T_{1\text{-}2}$  being exceeded, takes place in the first pairs of tracks, the requirement as specified here ensures that, in the service life range (articulation of  $A_{22}$  relative to  $A_{12}$  < =  $2\beta$  on both sides each) no axial forces occur at the cage, but that the cage is kept free from axial forces in the outer joint part.

On page 29 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

Whereas the service life angle  $2\beta$   $\underline{\beta}$  is a centre center angle with reference to the joint centre center M – i.e. it starts from the longitudinal axis  $A_{12}$  and the central plane E respectively and, in this way, describes the position of a ball on the track centre center line  $L_{18}$ ,  $L_{19}$  - the centre center of the angle  $\alpha$  at the tangent at the track centre center line in the turning point  $T_{1-2}$  features an offset  $O_2$  and  $O_2$  respectively relative to the joint centre center M.

On page 29 and continuing on page 30 of the English Language translation of the specification, please amend the third full paragraph of the specification to appear as follows:

Figure 5 shows the relationship between the service life angle  $\beta$  with reference to the travel of the ball along the track <u>centre</u> line L<sub>18</sub> in the outer joint part <u>212</u> relative to the turning point angle  $\alpha$ , with the

$$\alpha \ge \beta + \arcsin \left[ \frac{O_2}{R_2} - \sin (\beta + 90^\circ) \right]$$

being applicable.

On page 30 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

Figure 6, with reference to an outer joint part 42  $\underline{212}$  according to Figure 5, shows the influence of the turning point angle  $\alpha$  on the track enveloping angle  $\epsilon$  in the outer joint part. The track enveloping angle  $\epsilon$  is defined as the angle between a radial plane R and a ray through the ball centre center and, respectively, the track centre center line L<sub>18</sub> at a track edge. When the track enveloping angle  $\epsilon$  becomes small, there occur disadvantageous edge loads in the tracks 48  $\underline{218}$ , which edge loads can lead to damage. The torque transmitting capacity is thus limited. Up to a turning point angle  $\alpha$  of 16° the track enveloping angle  $\epsilon$  is still sufficiently large.

On page 30 and continuing on page 31 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

Figure 7 shows the relationship between the service life angle  $\underline{\beta}$  with reference to the travel of the ball in the track ( $\underline{\beta}$ ) and the turning point angle  $\alpha$  for a second possible embodiment of an inventive outer joint part 312. This figure shows the first outer ball track 318 and second outer ball track 320. In the region around the central joint plane E, the centre center line L<sub>18</sub> of the ball track 48 318 comprises an arch having a smaller radius R<sub>2</sub> with a centre center M<sub>2</sub> which, relative to the joint centre center M, is offset by an axial offset O<sub>2</sub> and by a radial offset a. The tangent at the turning point T<sub>1-2</sub> is defined via said angle. From the turning point, the track centre center line continues with an arch having a radius R<sub>1</sub> around a centre center M<sub>1</sub> which is determined by the value of R<sub>1</sub> and by the value of the angle  $\alpha$ . Between the service life angle  $\beta$  centered around the joint centre center M and the turning point angle  $\alpha$ , there applies the equation:

$$\alpha \ge \beta + \arcsin \left[ \frac{O_2 + a \cdot \tan(\beta)}{R_2} - \sin(\beta + 90^\circ) \right]$$

On page 31 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

Figure 8 shows the relationship between the service life angle  $\underline{\beta}$  with reference to the travel of the ball in the track  $(\underline{\beta})$  and the turning point angle  $\alpha$  for a second possible embodiment of an inventive outer joint part  $\underline{412}$ . This figure shows the first outer ball track  $\underline{418}$  and second outer ball track  $\underline{420}$ . In the region around the central joint plane E, the centre center line  $L_{18}$  of the ball track  $\underline{48}$  and second outer ball track  $\underline{48}$  and comprises an arch having a smaller radius  $R_2$  with a centre center  $M_2$  which, relative to the joint centre center  $M_1$ , is offset by an axial offset  $O_2$  and by a radial offset  $D_2$  and  $D_2$  are track and  $D_3$  around a centre center  $D_3$  which is determined by the value of  $D_3$  and by the value of the angle  $D_3$ . Between the service life angle  $D_3$  entered around the joint centre center  $D_3$  and the turning point angle  $D_3$ , there applies the equation:

$$\alpha \ge \beta + \arcsin \left[ \frac{O_2 - b \cdot \tan(\beta)}{R_2} - \sin(\beta + 90^\circ) \right]$$

On page 31 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

Figure 9 shows an inventive 6-ball joint  $\underline{511}$  wherein the centre center lines  $L_{18}$  of the outer ball tracks  $\underline{18}$  are composed of  $\underline{518}$  comprise three arches having the radii  $R_1$ ,  $R_2$ ,  $R_3$ , with the arches of the radii  $R_1$ ,  $R_2$  adjoining one another via a turning point, whereas the centre center lines  $L_{20}$  of the second outer ball tracks  $\underline{29}$   $\underline{520}$  are defined by an arch having a radius  $R_5$  with an adjoining axis-parallel straight line. As compared to Figure 1, further modified features have been indexed by  $\underline{500}$ .

On page 31 and continuing on page 32 of the English Language translation of the specification, please amend the third full paragraph of the specification to appear as follows:

Figure 10 shows an inventive 6-ball joint  $\underline{611}$  wherein the centre  $\underline{\text{center}}$  lines  $L_{18}$  of the outer ball tracks  $\underline{18}$  are composed of  $\underline{518}$  comprise three  $\underline{\text{arches having}}$  radii  $R_1$ ,  $R_2$ ,  $R_3$ , with the  $\underline{\text{arches of the}}$  radii  $R_1$ ,  $R_2$  adjoining one another via a turning point, whereas the centre  $\underline{\text{center}}$  lines  $L_{20}$  of the second outer ball tracks  $\underline{20}$   $\underline{620}$  are defined by two  $\underline{\text{arches}}$  with the radii  $R_4$ ,  $R_5$  which adjoin one another via a turning point. As compared to Figure 9, modified features are indexed by  $\underline{600}$ .

On page 32 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

Figure 11 shows an inventive 6-ball joint wherein the centre center lines  $L_{18}$  of the outer ball tracks 18 are composed of 518 comprise three arches having the radii  $R_1$ ,  $R_2$ ,  $R_3$ , with the arches of the radii  $R_1$ ,  $R_2$  adjoining one another via a turning point, whereas the centre center lines  $L_{20}$  of the second outer ball tracks 20 720 are defined by an arch having a radius  $R_5$ . The second tracks are thus of the same type as the tracks of RF joints. As compared to Figure 9, modified features are indexed by 700.

On page 32 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

Figure 12 shows an inventive 6-ball joint wherein the centre center lines  $L_{18}$  of the outer ball tracks 18-are-composed of 818 comprise two arches having the radii  $R_2$ ,  $R_3$  and a straight line tangentially adjoining the radius  $R_2$  in the direction towards the aperture, whereas the centre center lines  $L_{20}$  of the second outer ball tracks 20 720 are defined by an arch with a radius  $R_5$ . As compared to Figure 11, modified features have been indexed by 800.

On page 32 of the English Language translation of the specification, please amend the third full paragraph of the specification to appear as follows:

Figure 13 shows an inventive 8-ball joint wherein the centre center lines  $L_{18}$  of the outer ball tracks 18-are composed of 918 comprise three arches having the radii  $R_1$ ,  $R_2$ ,  $R_3$ , wherein the arches of the radii  $R_1$ ,  $R_2$  adjoin one another via a turning point, whereas the centre center lines  $L_{20}$  of the second outer ball tracks 20 920 are defined by an arch having a radius  $R_5$  with an adjoining axis-parallel straight line. As compared to the proceeding figures, modified components have been indexed by 900.

On page 32 and continuing on page 33 of the English Language translation of the specification, please amend the fourth full paragraph of the specification to appear as follows:

Figure 14 shows an inventive 8-ball joint wherein the centre center lines  $L_{18}$  of the outer ball tracks 18 are composed of 918 comprise three arches having the radii  $R_1$ ,  $R_2$ ,  $R_3$ , wherein the arches having the radii  $R_1$ ,  $R_2$  adjoin one another via a turning point, whereas the centre center lines  $L_{20}$  of the second outer ball tracks 20 1020 are defined by two arches having the radii  $R_4$ ,  $R_5$  which adjoin one another via a turning point. As compared to Figure 13, modified features have been indexed by 1000.

On page 33 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

Figure 15 shows an inventive 8-ball joint wherein the centre center lines  $L_{18}$  of the outer ball tracks 18 are composed of 918 comprise three arches having the radii  $R_1$ ,  $R_2$ ,  $R_3$ , wherein the arches of the radii  $R_1$ ,  $R_2$  adjoin one another via a turning point, whereas the centre center lines  $L_{20}$  of the second outer ball tracks 20 1120 are defined by an arch with a radius  $R_5$ . The second tracks are thus of the same type as the tracks of RF joints. As compared to Figure 13, modified features have been indexed by 1100.

On page 33 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

Figure 16 shows an inventive 8-ball joint wherein the centre center lines of the outer ball tracks 18 are composed of 1218 comprise two arches having the radii  $R_2$ ,  $R_3$  and a straight line tangentially adjoining the arch having the radius  $R_2$  in the direction towards the aperture, whereas the centre center lines  $L_{20}$  of the second outer ball tracks 20 1120 are defined by an arch having a radius  $R_5$ . As compared to Figures 13-15, modified features have been indexed by 1200.

On page 33 of the English Language translation of the specification, please amend the third full paragraph of the specification to appear as follows:

Figure 17 shows in detail the shape of the first outer ball tracks  $\underline{18}$  and of the first inner ball tracks  $\underline{19}$  for a 6-ball counter track joint according to Figure 1, with the centre center line L<sub>18</sub> of the first outer ball track 18 being composed of two comprising two arches with the radii R<sub>1</sub>, R<sub>2</sub>, as already described above, and with the centre center line L<sub>19</sub> of the inner ball track 19 consisting of comprising two arches with the radii R<sub>1'</sub>, R<sub>2'</sub> which are symmetrical relative to the joint centre center M. In addition, the Figure shows, in the form of a table, the relationship between the turning point angle  $\alpha$  and the track enveloping angle  $\epsilon$  for the track 18 in the outer joint part and the tracken veloping track enveloping angle  $\epsilon$  for the track 19 in the inner joint part. This shows that it is necessary for  $\alpha >= 10^{\circ}$  and  $\leq 18^{\circ}$  to be able to ensure satisfactory enveloping angles  $\epsilon$ ,  $\epsilon$ .

On page 34 of the English Language translation of the specification, please amend the first full paragraph of the specification to appear as follows:

Figure 18 shows an inventive 8-ball joint which corresponds to that shown in Figure 13, with the ball cage  $46\ 916$  additionally being shown in the form of a detail in the cross-sectional view. Furthermore, it can be seen that the cage windows  $43\ 913$  for the first balls  $17_1$  comprise a shorter circumferential length  $L_1$  than the cage windows  $24\ 924$  for the second balls  $17_2$  which comprise a longer circumferential length  $L_2$ . The outer ball cage diameter has been given the reference symbol DCA and the inner cage diameter the reference symbol DCI, in both cases with reference to the central plane E in which the ball cage 916 is shown in section. The circumferential width of the cage webs, on the outside, has been given the reference symbol W. The pitch circle radius diameter of the balls in the joint is referred to as PCDB, whereas the insertion aperture for the shaft in the inner joint part comprises a diameter PCDS. In case the connection between the

inner joint part 45 and the shaft 22 (not shown) is produced via shaft teeth, said diameter PCDS equals the mean teeth diameter of the shaft teeth in the inner joint part.

On page 34 of the English Language translation of the specification, please amend the second full paragraph of the specification to appear as follows:

Figure 19, which refers to an 8-ball joint, shows the track centre center lines at the outer joint part  $\underline{1012}$  and at the inner joint part  $\underline{1015}$  separately. The first outer tracks  $\underline{48}$  are composed of  $\underline{918}$  comprise the three above-mentioned arches with the radii  $R_1$ ,  $R_2$ ,  $R_3$ ,[[,]] whereas the track centre center line of the first inner ball track censists of  $\underline{919}$  comprises three identically sized arched having the radii  $R_1$ ,  $R_2$ ,  $R_3$  positioned symmetrically relative thereto. The two second outer ball tracks are composed of  $\underline{1020}$  comprise arches having the radii  $R_4$  and  $R_5$ , whereas the corresponding second inner ball tracks  $\underline{24}$   $\underline{1021}$ , with reference to the joint centre center M, comprise arches with the radii  $R_4$ ,  $R_5$  arranged symmetrically relative thereto. The greatest outer diameter of the outer joint part is referred to as OD and the axial length of the inner joint part as L.

On page 35 of the English Language translation of the specification, please add two new paragraphs at the end of the specification to appear as follows:

An inventive counter track joint with 8 balls for an angle of articulation of  $47^{\circ}$  –  $52^{\circ}$  is optimized if the following relationships are observed between individual measured parameters:

```
1/5 < PCDB / R1 < 1.9
1.8 < PCDB / R2 < 2.2
2.3 < PCDB / R3 < 2.7
2.1 < PCDB / R4 < 2.5
1.8 < PCDB / R5 < 2.2
12 < PCDB / O2 < 16
12 < PCDB / O5 < 16
0.6 < PCDB / OD < 0.8
2.1 < PCDB / DB < 4.0
2.1 < PCDB / DS < 2.5
0.75 < PCDB / DCA < 1.05
0.85 < PCDB / DCI < 1.15
```

```
7.5 < PCDB / W < 11.5
2.8 < PCDB / L1 < 3.4
2.6 < PCDB / L2 < 3.2
```

In said relationships, the parameters used have the following meaning:

PCDB: pitch circle diameter of balls

R1: outer part ball track radius 1 (first ball tracks) R2: outer part ball track radius 2 (first ball tracks) R3: outer part ball track radius 3 (first ball tracks) R4: outer part ball track radius 4 (second ball tracks) R5: outer part ball track radius 5 (second ball tracks)

O2: outer part ball track offset for track with opening angle towards attaching end O5: outer part ball track offset for track with opening angle towards aperture end

OD: outer diameter outer part

L: length inner part DB: ball diameter

PCDS: pitch circle diameter of splines

DCA: cage outer diameter DCI: cage inner diameter W: cage web width

L1: cage window length 1 (first cage windows) L2: cage window length 2 (second cage windows).